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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,428	04/06/2001	Seth J. Orlow	71369.162	6098

23483 7590 05/18/2006

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EXAMINER	
LEWIS, AMY A	

ART UNIT	PAPER NUMBER
1614	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/827,428	ORLOW ET AL.	
	Examiner	Art Unit	
	Amy A. Lewis	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/20/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Case

The examiner for the instant application has changed. The current examiner assigned to this application is Amy A. Lewis.

The Amendments and Remarks, filed 13 January 2006, have been entered into the application. Accordingly, claim 82 has been amended, and claims 1-81 and 83-92 have been cancelled.

Claim 82, as filed 13 January 2006, are presented for examination.

Applicants' arguments, filed 13 January 2006, have been fully considered but they are not deemed persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. Unfortunately, upon reconsideration of the claims, and contrary to the interview of November 21, 2005, the following rejections are set forth. They constitute the complete set presently being applied to the instant application.

Rejection of claim 82 under 35 U.S.C. 103(a) as being unpatentable over Kagan (US Patent No. 3,389,051) in view of Szycher et al. (CA117:239546), is *withdrawn* in view of the new/modified grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kagan (US Patent No. 3,389,051) in view of Perricone (US Patent No. 5409693).

Kagan discloses a compound of formula I which corresponds to compound VIII of instant claim 82 and its use in a composition (column 1, lines 23-33, column 4, lines 70-75). Additionally, Kagen discloses adapting the composition in suitable forms for administration, such as suspensions in aqueous or oil vehicles as well as aqueous or oil dispersions (see column 4, lines 73-75). The instant claims differ over Kagan in reciting a compound that reduces skin pigmentation by affecting an alteration in late endosomal/lysosomal trafficking in a skin cell and its use in a dermatologically acceptable carrier for percutaneous absorption. However, intended use (for reducing skin pigmentation) does not impart patentability in a composition.

It would be obvious to one of ordinary skill in the art to deliver the composition of Kagan in a topically applied, controlled-release delivery system disclosed by Szycher, since said topically applied, controlled-release delivery system for drugs is a convenient, suitable method to deliver a drug.

Perricone discloses a composition topically applied to the skin in a dermatologically acceptable carrier (abstract). The reference teaches that compositions for percutaneous delivery can take the form of lotions and creams (col. 3 line 43-col. 4, line 6). Perricone does not teach the instantly claimed compound.

It would be obvious to one of ordinary skill in the art to deliver the composition of Kagan for percutaneous absorption in a cream or lotion. The skilled artisan would have

been motivated to make the composition in the form of a cream or lotion, and would have had a reasonable expectation of success, because creams and lotions are known dermatologically acceptable forms for percutaneous absorption.

Response to Applicants' Arguments, filed 13 January 2006:

Applicants argue that the claimed compositions provide unexpected results because they "alter the trafficking of proteins necessary for melanin synthesis, and decrease melanin production" (Remarks p. 9). This argument is unpersuasive because the instant claims are directed to a composition and not a method of use. Applicant has only alleged differences over the composition of Kagen but has not provided any evidence of distinguishing features.

While Kagen does not teach endosomal/lysosomal trafficking, this property is a functional limitation and an inherent property of that compound. It is noted that *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejection wherein the prior art discloses subject matter which there is a reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation, the burden is shifted to the Applicant to "prove that subject matter shown to be in the prior art does not possess characteristics relied on" (205 USPQ 594, second column, first full paragraph). Further, M.P.E.P. § 2112 reads, "The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable." Something that is old does not become patentable upon the discovery of a new property, use, or application.

Claim Rejections - 35 USC § 112 2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1) Claim 82 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 82 recites the limitation "effects an alteration in late endosomal/lysosomal trafficking." It is unclear as to what "effect" is taking place, what "effect" the composition has on altering the "late endosomal/lysosomal trafficking," such as an increase or decrease in the rate, an increase or decrease in the amount being "trafficked", etc. Also, it is unclear as to what is being "trafficked," from where is the thing being "trafficked," and to where is the thing being "trafficked."

In addition, the term "late" regarding endosonal/lysosomal trafficking is also indefinite. It is a relative term and it is unclear as to when such trafficking would be considered "late" as opposed to earlier trafficking; Applicants have failed to provide any specific definition for this term in the present specification. Lacking a clear meaning of the term "late endosomal/lysosomal trafficking," the skilled artisan would not be reasonably apprised of the metes and bounds of the subject matter for which Applicant seeks patent protection.

Claim Rejections - 35 USC § 112 1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2) Claim 82 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants' specification lacks enablement of how to make the compounds of Formulas II-VII.

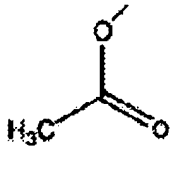
Attention is directed to *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing *Ex parte Forman*, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

1) Nature of the invention.
2) State of the prior art.
3) Relative skill of those in the art.
4) Level of predictability in the art.
5) Amount of direction or guidance provided by the inventor.
6) Presence or absence of working examples.
7) Breadth of the claims.
8) Quantity of experimentation necessary to make or use the invention based on the content of the disclosure.

The instant specification fails to provide guidance that would allow the skilled artisan to practice the instant invention without resorting to undue experimentation. While all of these factors are considered, a sufficient amount for a *prima facie* case are discussed below.

Applicants' specification states that the compounds of generic formula (I) are disclosed and may be synthesized following procedures detailed in various publications (see specification: p. 7 structure and p. 49, lines 23-25). While the compounds of claim 82 and the generic formula

(I) share a common core structure, the compounds of claim 82 (Formulas II-VIII) contain additional features not described in the process of synthesizing generic formula (I). For example, compounds (II) and (III) contain reactive functional groups such as



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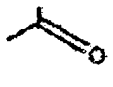

, and double bonds. In addition, compounds III, and V-VIII contain specific stereochemistry and compounds II and VIII contain an additional right system directly attached to the core structure of generic (I). Applicants do not describe how one of ordinary skill in the art would attach such groups to the generic (I) structure, or how to protect and maintain such reactive functional groups through the synthesis process, or how to obtain and maintain the specific stereochemistry.

Absent a reasonable *a priori* expectation of success for synthesizing the compounds II-VIII of claim 82, one skilled in the art would have to extensively test various processes of synthesis in order to obtain the claimed compounds. An undue amount of experimentation would be required to practice the invention as it is claimed in its current scope, because the specification provides inadequate guidance to do otherwise.

3) Claim 82 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants' specification lacks enablement of altering late endosomal/lysosomal trafficking.

The instant specification fails to provide guidance that would allow the skilled artisan to

practice the instant invention without resorting to undue experimentation. While all of these *Wands* factors (recited in above rejection) are considered, a sufficient amount for a *prima facie* case are discussed below.

The claim recited the limitation that the "effective amount" of the claimed composition be an amount which effects an alteration in late endosomal/lysosomal trafficking in a skin cell. The specification discloses an assay suing skin cells that tests skin cell pigmentation reduction but assaying the "alteration in late endosomal/lysosomal trafficking" is not described. Applicant has assessed the effect of pigmentation, but has not demonstrated results that indicated a direct connection between the pigmentation and the trafficking or described a way of assaying such trafficking.

Absent a reasonable *a priori* expectation of success for assaying the effect on the trafficking of claim 82, an undue amount of experimentation would be required to practice the invention, i.e. determine an effect on endosomal/lysosomal trafficking, as it is claimed in its current scope, because the specification provides inadequate guidance to do otherwise.

Conclusion

Claim 82 is are rejected. No claims are allowed.

Contact Information:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy A. Lewis whose telephone number is (571) 272-2765. The examiner can normally be reached on Monday-Friday, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Ardin H. Marschel 5/14/06
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